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## NEURO-PSYCHOPHARMACOLOGY OF AGGRESSION

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Aggression is a topic well investigated in neuro-psychopharmacology and behavioral research. Despite of the large number of publications dealing with this subject, many aspects are still not understood. The presentation centers on both the bio-social and the physiological regulation of aggression and its valid models. Recent studies have provided new endocrine and neurophysiologic insights into the underlying mechanisms. In the past, the steroid hormone testosterone (T) was believed to be the main endocrine activator of aggressive behavior and its expression rate. However, the importance of T seems to lie in its neuromodulatory function, especially in the regulation of overall dominance and competitive aggression. In turn, unrestrained aggression, impulsivity, and risk-taking behavior are associated with low central serotonergic activity. Other centrally active molecules, such as vasopressin or dopamine are also key players in mediating aggressiveness. In a social context, aggression is mostly applied in competitive processes to get access to limited resources such as food and mating partners, or for the defense of resources. Intriguingly, diverse forms of aggression are probably triggered by environmental factors such as the availability and quality of food. This presentation focuses both, availability and quality of food, with regard to their influence on anti-social behaviors in a variety of species and tries to work out their potential function as neurophysiologic modulators. Furthermore, unresolved methodological issues concerning the central activity of nutritional factors will be discussed.